



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/602,625	06/25/2003	Werner Stamm	1454.1009C	8975
21171	7590	03/16/2004	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005				MCNEIL, JENNIFER C
ART UNIT		PAPER NUMBER		
1775				

DATE MAILED: 03/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/602,625	STAMM, WERNER	
Examiner	Art Unit		
Jennifer C McNeil	1775		

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### **Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 25 June 2003.

2a)  This action is **FINAL**.                    2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## **Disposition of Claims**

4)  Claim(s) 1-19 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 1-19 is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)  All   b)  Some \* c)  None of:

1.  Certified copies of the priority documents have been received.
2.  Certified copies of the priority documents have been received in Application No. 09/674,328.
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.

4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_ .  
5)  Notice of Informal Patent Application (PTO-152)  
6)  Other: \_\_\_\_.

## DETAILED ACTION

### *Specification*

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The specification does not have proper antecedent basis for the range of yttrium, scandium and rare earth metals in claim 2. The range of the claims is 0.05% to 0.7% by weight, and the only reference in the specification is found on page 5, paragraph 18, which gives a range of 0.3-2% by weight. The same is true for the rhenium of the claims. The range claimed is 0.5-2%, 1.5%, or 0-2%, while the specification teaches 0-20. Claim 16 gives a range for ruthenium of 0-1%, but there is no antecedent basis for this found in the specification. The range of aluminum in the claims of 9-11.5% and chromium 15-21% is not in the specification. Finally, claims 18 and 19 refer to chromium-rhenium precipitations. There is no antecedent basis for this in the specification.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 and 5 are rejected under 35 U.S.C. 102(e) as being anticipated by Schmitz et al (US 5,993,980). Schmitz teaches a protective coating comprising 15-35 wt% Cr, 7-18 wt% Al, 5-20 wt% Re, 0.3-2 wt% Y or an equivalent from Sc and the rare earth elements, and at least one of Fe, Ni, and Co (col. 3, lines 40-48). Regarding claim 5, the substrate is a component for a gas turbine.

Claims 1-9, and 11-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Smeggil et al (US 4,451,299). Smeggil teaches a high temperature coating including a coating of MCrAlY having a depletion zone (41) comprised of the gamma phase (col. 4, lines 4-10). Smeggil teaches that the partial melting of the surface portion of the coating enhances the protective capabilities of the high temperature coating. Regarding the composition of the coating, Smeggil teaches that the Cr is about 15-45 wt%, Al is about 7-20 wt%, Re is up to 10 wt%, and Y is about 0.1-5 wt% (col. 3, lines 1-15). Regarding claims 8 and 9, the method limitations are not considered to structurally define the article over that of the prior art. Regarding claim 14, the substrate may be a component of a turbine engine.

*Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9, and 11-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smeggil et al (US 4,451,299). Smeggil teaches the coating as described above, including overlapping ranges of the compositions. While Smeggil does not give specific examples within the ranges, it would have been obvious to one of ordinary skill in the art at the time of the invention to have selected the overlapping portion of the ranges disclosed by the reference because overlapping ranges have been held to be a *prima facie* case of obviousness, *In re Malagari*, 182 USPQ 549.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Smeggil et al (US 4,451,299) in view of Taylor et al (US 5,741,556). Smeggil teaches a coating as discussed above but does not include zirconium. Warnes teaches an improved MCrAlY coating that may also include a reactive element such as Zr. It would have been obvious to one of ordinary skill in the art at the time of the invention to use an MCrAlY layer including Zr as taught by Taylor for the coating of Smeggil, to provide a known MCrAlY-types protective layer with enhanced protective capabilities.

*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer C McNeil whose telephone number is 571-272-1540. The examiner can normally be reached on 9AM-6PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on 571-272-1535. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



JCM  
March 7, 2004